

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022134**Date Inspected:** 23-Mar-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** An Qing Xiang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

This Quality Assurance (QA) Inspector observed the following work in progress:

Bay 14

OBG Seg 14W:

Repair welding of weld joint no: SEG3020AG-006 [Edge Plate (EP) 3030B to Floor Beam (FB) 3321A, Complete Joint Penetration (CJP) weld at panel point (PP) 126]. The welder is identified as 067520 and was observed welding in the 3G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: 345-SMAW-3G(3F)-FCM-Repair-1. Repair welding was done as per Welding Repair Report (WRR): B-WR 20428 Rev-0.

Repair welding of weld joint no: SEG3020AG-007 [EP3030C to FB3321A, CJP weld at PP 126]. The welder is identified as 066398 and was observed welding in the 3G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this

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QC appeared to comply with WPS: 345-SMAW-3G(3F)-FCM-Repair-1. Repair welding was done as per Welding Repair Report (WRR): B-WR 20428 Rev-0.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020AY-318 [I-rib stiffener RS3534AK to I-rib stiffener RS3534AE on Side Panel (SP) 3133A, complete joint penetration (CJP) weld at PP127.5]. The welder is identified as 037779 and was observed welding in 3G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with welding procedure specification (WPS): B-P-2213-B-U2-FCM-1.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020AY-284 [I-rib stiffener RS3534AK on SP 3132A to Floor Beam (FB) 3330A, complete joint penetration (CJP) weld at PP127.5]. The welder is identified as 037779 and was observed welding in 3G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with welding procedure specification (WPS): B-P-2213-Tc-U4b-FCM-1.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: Seg3020BB-029 [Top anchorage plate (AP) 3014A to Vertical Shear Plate sub-assembly SA3446A, CJP weld in between panel point PP125 to PP126]. The welders are identified as 045246 and 051348 and were observed welding in 4G position. ZPMC QC was identified as An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: Seg3020BB-011 [Top anchorage plate (AP) 3013A to Vertical Shear Plate sub-assembly (SA3444A), CJP weld in between panel point PP125 to PP126]. The welders are identified as 067765 and 067609 and were observed welding in 4G position. ZPMC QC was identified as An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: Seg3020BB-074 [Top anchorage plate (AP) 3016A to Vertical Shear Plate sub-assembly (SA3451A), CJP weld in between panel point PP125 to PP126]. The welder is identified as 067942 and was observed welding in 4G position. ZPMC QC was identified as An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

The SMAW process on weld joint no: SEG3020AG-009 [Edge Plate (EP) 3030D to Edge Panel (EP) 3030E, CJP weld from PP127.5 to PP128]. The welder is identified as 067942 and was observed welding in 4G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: B-P-2214-B-U2-FCM-1.

The FCAW process on weld joint no: Seg3020BD-006 [East Cable Horizontal stiffener plate (X5080A) on Vertical Shear Plate sub-assembly (SA3448A) to Anchor Plate (AP3032A), CJP weld at PP126]. The welder is identified as 067949 and was observed welding in 1G position. ZPMC QC was identified as An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-T-2231-ESAB.

During random in process inspection this QA inspector observed the installation of Floor Beam Sub Assembly FB3450A/FB3347A at Panel Point 128.7 of segment 14W. See attached photographs for more details.

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## OBG Segment 13CW

During random in process inspection this QA inspector observed that AB/F NDT personnel Mr. Wang Bei was performing Magnetic Particle Testing (MT) on the back gouging area of weld joint of Architectural Housing (AH) Sub Assembly of segment 13CW. The weld joint is identified as AH3002-025. See attached photographs for more details.

The FCAW process on weld joint no: AH3003-001[EP3026A to SP3115A, CJP weld]. The welders are identified as 066695 and 047866 and were observed welding in 1G position. ZPMC QC was identified as An Qing Xiang. The welding variables recorded by this QC appeared to comply with WPS: B-T-2231-ESAB. See attached photographs for more details.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



## Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or

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remedial efforts please contact Eric Tsang : 15000422372, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Gaikwad,Umesh	Quality Assurance Inspector
<b>Reviewed By:</b>	Peterson,Art	QA Reviewer

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